

PATENT

Attorney Docket No. D0932-404

Listing of Claims:

1. (Currently amended) A glass fiber air filtration media comprising:
glass fibers; and
plastic-containing bonding fibers uniformly blended together with the glass fibers and
bonding at least a portion of the glass fibers together by forming bonds at points of intersection
between the glass fibers and the plastic-containing bonding fibers, wherein
the gram weight of the air filtration media varies no more than $\pm 5\%$.
2. (Original) The glass fiber air filtration media of claim 1, wherein the air filtration media has
a first major side and a second major side;
a thermoplastic non-woven facing layer bonded to one of the two major sides of the air
filtration media.
3. (Original) The glass fiber air filtration media of claim 2, wherein the thermoplastic non-
woven facing layer comprises a polypropylene polymer.
4. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers are rotary
glass fibers.
5. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers are loose-
fill glass fibers.
6. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers have an
average fiber diameter not greater than about 5 microns.
7. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers have an
average fiber diameter not greater than about 3 microns.
8. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers have an
average length not greater than about 76 mm (3 inches).

PATENT

Attorney Docket No. D0932-404

9. (Original) The glass fiber air filtration media of claim 1, wherein the glass fibers have an average length not greater than about 51 mm (2 inches) in length.
10. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers having an average fiber diameter not greater than about 20 microns.
11. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers having an average fiber diameter of about 16 microns.
12. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers having an average length between about 10 to 127 mm (0.4 to 5 inches).
13. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers having an average length of not greater than about 102 mm (4 inches).
14. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers are between about 5 to 50 wt. % of the air filtration media.
15. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers are between about 10 to 30 wt. % of the air filtration media.
16. (Canceled)
17. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers are bi-component thermoplastic polymer fibers.
18. (Original) The glass fiber air filtration media of claim 1, wherein the plastic-containing bonding fibers are mono-component thermoplastic polymer fibers.
19. (Original) The glass fiber air filtration media of claim 1, wherein the air filtration media is substantially formaldehyde-free.

PATENT

Attorney Docket No. D0932-404

20. (Original) The glass fiber air filtration media of claim 17, wherein the bi-component thermoplastic polymer fibers comprise:
a core material; and
a sheath material, the sheath material having a melting point temperature that is lower than the melting point temperature of the core material, wherein the sheath material forms the bonds at the points of intersection between the glass fibers and the plastic-containing bonding fibers.
21. (Original) The glass fiber air filtration media of claim 20, wherein the core material and the sheath material are both thermoplastic polymers
22. (Original) The glass fiber air filtration media of claim 20, wherein the core material is a mineral and the sheath material is a thermoplastic polymer.
23. (Original) The glass fiber air filtration media of claim 20, wherein the core material and the sheath material are same thermoplastic polymer but of different formulation.
24. (Currently amended) An air filter fabricated from a glass fiber air filtration media, wherein the glass fiber air filtration media comprises:
glass fibers, and
plastic-containing bonding fibers uniformly blended together with the glass fibers and bonding at least a portion of the glass fibers together by forming bonds at points of intersection between the glass fibers and the plastic-containing bonding fibers, wherein the gram weight of the air filtration media varies no more than $\pm 5\%$.
25. (Original) The air filter of claim 24, wherein the air filter is a bag filter.
26. (Original) The air filter of claim 25, wherein the air filter is a cube filter.
27. (Original) The air filter of claim 24, wherein the air filter is a pocket filter.
28. (Original) The air filter of claim 24, wherein the air filter is a panel filter.

PATENT

Attorney Docket No. D0932-404

29. (Original) The air filter of claim 24, wherein the air filtration media has a first major side and a second major side;
a polyethylene non-woven facing layer bonded to one of the two major sides of the air filtration media.
30. (Original) The air filter of claim 24, wherein the glass fibers are rotary glass fibers.
31. (Original) The air filter of claim 24, wherein the glass fibers are loose-fill glass fibers.
32. (Original) The air filter of claim 24, wherein the glass fibers have an average fiber diameter not greater than about 5 microns.
33. (Original) The air filter of claim 24, wherein the glass fibers have an average fiber diameter not greater than about 3 microns.
34. (Original) The air filter of claim 24, wherein the glass fibers have an average length not greater than about 76 mm (3 inches).
35. (Original) The air filter of claim 24, wherein the glass fibers have an average length not greater than about 51 mm (2 inches) in length.
36. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers having an average fiber diameter not greater than about 20 microns.
37. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers having an average fiber diameter of about 16 μ m.
38. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers having an average length between about 10 to 127 mm (0.4 to 5 inches).
39. (Original) The air filter of claim 24, wherein the having an average length of not greater than about 102 mm (4 inches).

PATENT

Attorney Docket No. D0932-404

40. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers are between about 5 to 50 wt. % of the air filtration media.
41. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers are between about 10 to 30 wt. % of the air filtration media.
42. (Canceled).
43. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers are bi-component thermoplastic polymer fibers.
44. (Original) The air filter of claim 24, wherein the plastic-containing bonding fibers are mono-component thermoplastic polymer fibers.
45. (Original) The air filter of claim 43, wherein the bi-component thermoplastic polymer fibers comprise:
- a core material; and
 - a sheath material, the sheath material has a melting point temperature that is lower than the melting point temperature of the core material, wherein the sheath material forms the bonds at the points of intersection between the glass fibers and the plastic-containing bonding fibers.
46. (Original) The air filter of claim 45, wherein the core material and the sheath material are both thermoplastic polymers.
47. (Original) The air filter of claim 45, wherein the core material is a mineral and the sheath material is a thermoplastic polymer.
48. (Original) The air filter of claim 45, wherein the core material and the sheath material are same thermoplastic polymer but of different formulation.

PATENT

Attorney Docket No. D0932-404

49. (Original) The air filter of claim 45, wherein the air filter is substantially formaldehyde-free.

50.-59. (Canceled)

60. (New) The glass fiber air filtration media of claim 1, wherein the gram weight of the air filtration media is about 70 gm/m^2 .

61. (New) The air filter of claim 24, wherein the gram weight of the air filtration media is about 70 gm/m^2 .